

DETAILED ACTION

Applicant's election without traverse of Group 1, claims 1-4 and 6-28 in the reply filed on June 16, 2011 is acknowledged.

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in United Kingdom on January 6, 2004. It is noted, however, that applicant has not filed a certified copy of the British application as required by 35 U.S.C. 119(b).

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors, e.g., typographical, grammar, idiomatic, syntax and etc. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required. The abstract in the PCT does not suffice.

The disclosure is objected to because the continuing data regarding the 371 is missing from the specification.

Claims 1-4 and 6-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a). Claim 11 is already recited in claim 1, claimed twice?

b). Claim 27 is at odds with the claim from which it depends, i.e., claim 1. Claim 27 recites " An apparatus for producing concentrated solutions or dry solvate", whereas

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claim 1 recites “An apparatus for concentrating solutions in a vaporising receptacle” which is inconsistent therewith. Also, “the mouth of the receptacle facing upwards” in claim 25 appears to be at odds with claim 1 recitation of “the about a substantially vertical rotation axis”. [A dependent claim incorporates every features of the claim from which it depends and cannot change nor orient the limitation(s) already recited in the independent claim]. Moreover, claim 27 appears to be broadening the apparatus of claim 1 with the second apparatus.

c). Claim 28, as recited, is in improper Markush language.

--- Wherein R is A, B, or C ---; and

--- Wherein R is selected from a group consisting of A, B, and C--- would both constitute proper Markush languages.

d). Claim 28 is an improper dependent claim for failing to further limit the subject matter of claim 1. The process recited in claim 28 does not add any further structural features to the apparatus of claim 1. [Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form].

e). The claimed “a hot air heater arranged to direct hot air flow onto the receptacle” is not understood. A heater is normally for heating purposes, not for directing flow as claimed?

f). The claimed “about a substantially vertical rotation axis” in claim 1 is a relative term which renders the claim indefinite. The above claimed language is not defined by the claim, the specification does not provide a standard for ascertaining the requisite

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degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claims 1-6 and 6-28 are objected to because of the following reasons:

a). The inconsistent used of terminology in the claims is improper. For examples:

- 1). "hot air heater" in claim 1, last line as opposed to "the heating means" in claim 6;
- 2). "comprising" in claim 1, as opposed to "further including" e.g., in claims 2-3. see also claims 6 and 7.

b). Note typographical error such as vapour, recited e.g., in claim 1 which should be —vapor—as the latter is the term normally used in the U.S.

c). There are no proper antecedent basis for support in the claims for the following recitations:

- 1). "said dispensing means"; "said sensing means" and "said heating means" all recited in claim 7;
- 2). "the control unit" in claim 21;
- 3). "the means for dispensing the solution" in claim 22; and
- 4). "the nozzle" in claims 23-24.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 6-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2 334 688 or Lucas (3,871,574) in view of Lautenschlinger (5,447,077) or Guy et al (5,084,133) .

GB '688 discloses at page 5, third and fourth full paragraphs an apparatus wherein the sample holders are typically rotated at a speed of between 500 - 3000 rpm depending on the g-force required to be imposed on the sample and the radius at which the samples are rotated....centrifugal evaporating apparatus comprises a vacuum chamber, a plurality of sample holders for containing liquid samples to be evaporated, which are located therein for rotation about a generally vertical axis, heating means for heating the sample holders and therefore the liquid samples therein, temperature sensitive probe means located in or adjacent at least one of the sample holders, signal path means for conveying electrical signals from the probe means to a signal processing means located within the chamber, a transmitting device also within the chamber for transmitting signals to a receiver outside the chamber, signals from the signal processing means being employed to modulate the transmitted signals so that when decoded by the remote receiver, the latter will provide a signal containing information about the temperature of the probe. At page 10, last full paragraph GB '688 further discloses that the samples may be contained in an array of tubes, bottles or vials held in holders which uniformly swing upwardly from a vertical position to a generally horizontal position during rotation of a platform on which they are mounted, or in wells in a microtitre plate which can also be swung upwardly. Additionally, at pages 12-13, GB '688 discloses that a centrifugal evaporator wherein the samples are contained in blocks

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(4) in which there are numerous sample wells and wherein the sample holder rotor 5A and shaft 5B rotates, driven by a motor 5C, which may be inside but more usually external to the chamber (14), the sample blocks swing out to the position in which the sample wells are horizontal, under the influence of centrifugal force. The sample blocks are connected to pivots (13) and the blocks are held with the wells vertical for loading into a stationary evaporator. Vacuum is then applied to the evaporator chamber (14) via pipe (9) from the vapour condenser which in turn is pumped via pipe (10) by the vacuum pump. Heat is applied to the rotating sample blocks (4) by a high temperature infra-red radiation source (1), and radiant heat energy (2) passes through a window of heat-transparent material such as quartz which is sealed into the wall of the vacuum chamber (14) and reaches the sample holder. A temperature sensor or probe (15) is placed in one of the sample wells, or otherwise placed in close proximity to the wells in one of the sample blocks, and is connected to transmitter (11) which transmits signals corresponding to the sample temperature to an aerial and feedthrough (6) inside and extending through the chamber wall, and which is connected to a receiver and decoder (16). In like manner, Lucas discloses an evaporator for concentrating thermo-labile fluids, said evaporator comprising: a standard bottle used as a vaporising receptacle and is vertically rotated at high speed, with a mouth facing upwardly, which is supported by suitable rotary supporting means; a vacuum pump to reduce the pressure within the standard bottle; and a vacuum chamber 10 in which the bottle containing the sample is placed. Said vacuum chamber is the means for sealing the bottle for maintaining the reduced pressure within. it as called for in present claim 1. See Fig. 1 and col.2, 1.15-

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16. The apparatus of the above references differ from the claimed invention in that claim 1, for example, recites "a hot air heater arranged to direct hot air flow onto the receptacle". However, either of Lautenschlinger or Guy teaches that said limitation is a known expediency in the art. See col. 2, lines 8-15 of Guy; and col. 9, lines 30-43 of Lautenschlinger. To incorporate the hot air heater of Lautenschlinger or Guy to the apparatus of GB 2 334 688 or Lucas, to arrive at the claimed invention, would have been obvious to one of ordinary skill in the art motivated by a reasonable expectation of success as defined at col. 3, lines 47-65 of the Lautenschlinger reference.

Lautenschlinger further discloses at col. 10, lines 31-39, the sensing means to measure the temperature of the solution within the vaporizing receptacle, wherein said sensing means is a non-contact temperature sensor.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

WO' 212 discloses a centrifugal evaporator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Manoharan whose telephone number is (571) 272-1450.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Virginia Manoharan/
Primary Examiner, Art Unit 1771